Working Title: Fruit, Vegetable, and Fiber Intake Based on Neighborhood Food Source Quality

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Food choice has major implications for an individual’s health and well-being over time. Consuming the recommended amounts of fruit, vegetable, and fibrous foods promotes healthy aging and is crucial for preventing many harmful health conditions. Access to healthy food is multifactorial as cost, distance, and other factors all play a role in having proper access. The term “food desert” is commonly used as defined by the United States Department of Agriculture, however, the metrics used to classify a food desert have come under scrutiny due to the inherent inaccuracies and issues with the classification failing to offer meaningful solutions to healthy food access.

Relevant studies have shown that many individuals do not shop at their nearest supermarket; therefore, all area supermarkets should be considered. This study will use the CATSLife participant responses on regular diet consumption to score their Fruit/Vegetable Intake along with Fiber Intake using the PhenX Protocol. Overall financial stability will be gauged using the responses to the financial well-being questions. Finally, participants’ home locations will be used to better understand the surrounding neighborhood’s impact on food access and choice.

Neighborhood food sources will be identified and classified based on food quality and cost. The food quality scale will be based on the availability of fruits, vegetables, and healthy fibrous foods. Fast food restaurants and convenience stores, for example, will likely be classified as having low food quality due to their lack of healthy foods. A further classification in addition to quality will be the overall cost at each food source in each neighborhood. It is expected that such low-quality food sources as fast food and convenience stores will also be classified as low-cost. Supermarkets, however, present a more difficult task to classify based on the wide variety across the United States. Based on related literature, the method used to differentiate costs across different supermarkets will be based on the overall cost of 100 common foods found in supermarkets. Other food sources will also be factored in such as fruit stands and farmer’s markets, which would be expected to be classified as high-quality low-cost food sources. Using ArcGIS, we will map out all food sources within each participant’s broad neighborhood to perform the analysis.

Analyses performed will include comparing the fruit/vegetable and fiber scores to the neighborhood food sources while factoring in the participant’s finances. We will also compare the frequency of eating fast food over a week by the participants to the neighborhood density of fast-food sources. We expect that financially stressed individuals will typically have lower fruit/veg and fiber scores in neighborhoods with many fast-food restaurants and/or predominately high-quality high-cost supermarkets. However, we are interested to determine whether the presence of high-quality low-cost food sources including fruit stands and farmer’s markets correlate to higher fruit/veg and fiber scores in all individuals regardless of financial situation. We plan to also incorporate participant education level and neighborhood socioeconomic status as factors in food choice. Previous literature hints at complications in including rural participants in a study such as this. For this reason, we plan to consider the location of each research participant and will likely place the focus on participants not living in rural areas. This study could provide crucial implications for more direct farm-to-table markets and stores to better address low-quality food choices across areas with less high-quality food access.

Select related sources to use:

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Sample(s): CATSLife

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